



## **Hydroxychloroquine: Patient reported availability** **A survey amongst lupus patients**

Media speculations on Hydroxychloroquine (HcQ) as a potential medication in the fight against COVID have created tensions in the supply chain for this drug. This is partly due to "off label" prescription (i.e. doctors prescribing HcQ for a currently unapproved use, like COVID), individual hoarding (like for toilet paper...), or wholesaler level exports to more lucrative markets. As a result, HcQ has been increasingly reported by lupus patients as being "out of stock" in their pharmacies.

LUPUS EUROPE and several of its members have raised the issue with manufacturers and authorities, and solutions have been put in place already in several countries, including increased control (or governmental control) on the distribution, restricting off label use to hospitals, and establishing an alternate channel to make HcQ available for pharmacies directly based on a prescription for "On label" (like lupus), use. The objective is that, all patients with a chronic condition requiring HcQ get it, if not immediately, at least within 3 days of ordering.

At the same time, to objectivate and follow up on the situation, LUPUS EUROPE initiated a survey amongst patients to understand the situation at the European level.

### **Method:**

A short questionnaire was built and translated from English into 11 languages (German, French, Spanish, Italian, Polish, Dutch, Slovak, Portuguese, Danish, Lithuanian and Finnish) by lupus volunteers. The questionnaire was distributed starting April 3 mostly via social media networks and patient group websites. The data is patient reported only. This piece of information should ideally be completed by pharmacy level analysis of unmet demand, where possible.

The answers to the questionnaire were downloaded on April 10 in the morning. The survey will remain open till end June, and the plan is to relaunch the survey on social media every month to follow and understand the trend in availability, hence checking sufficiency of the measures taken by the authorities and the pharmaceutical sector to deal with this issue.

2140 answers were received, of which 2072 said that they purchased HcQ. From those, 48 have been filled in outside of Europe and have been excluded, leaving 2024 valid European HcQ users' input. The highest level of questionnaire completion has been in France (390), United Kingdom (339), Germany (241), Bulgaria (185), Italy (144), Spain (114), Belgium (94), Portugal (67), Finland (65), Netherlands (61), and Slovakia (51). Since the participation rate is far from mirroring the European population, caution should apply in interpreting numbers.

In particular, Bulgaria facing a dramatic HcQ unavailability already before the COVID crisis is substantially over-represented in the answers. As its situation is very different from other countries, the overall results discussed below excluded the results of Bulgaria, which are covered in a separate paragraph at the end of this document.

## Overall Results:

### Availability trends:

Overall immediate availability of HcQ when asked in the usual pharmacy has **reduced from 65%** at the beginning of March **to 51% end March and 44% early April**. In parallel the level of prescriptions met in the same pharmacy, but with a delay, increased from 21 to 29%. The proportion of patients saying they could not obtain any, even after a long period increased from 6% at the beginning March to 8 % at the end of the month, and indications are that it could have further increased early April (14%). While it is possible that some of those people received Hydroxychloroquine in the next few days, it remains that 14% of respondents having tried to buy HcQ beginning April were, at the time of responding, without HcQ on hand.

Time of attempted purchase:	Beginning March	Mid-March	End March	Beginning April
"I could get some directly from the first place I asked"	65%	54%	51%	44%
"I could get some, but had to go to more than 1 pharmacy"	7%	12%	9%	9%
"I could not get any immediately, but obtained some later from the same/my usual pharmacy"	21%	20%	27%	29%
"I could not get any immediately, but obtained some later from another source"	2%	6%	6%	5%
"I could not get any, and I am still without it"	6%	6%	8%	14%
Grand Total	100%	100%	100%	100%

182 patients report having visited 1 to 10 other pharmacies after not obtaining HcQ in their usual one. On average, they have visited 3.11 pharmacies to obtain their medication. The number of additional pharmacies visited has not significantly changed over the month. To note, while most patients ultimately obtained HcQ from a pharmacy in their neighbourhood, 4 ended up ordering to internet "suppliers", 7 borrowing from a friend or colleague, and 30 obtained it from their doctor's hospital stock.

694 patients that were able to obtain delayed delivery of their HcQ reported the delay they experienced. The average delay faced by patients increased from around 2.2-3.0 days end Feb/early March to 3.8-5.4 days end of March/early April. 36.3% were able to obtain it the same or next day, 59.5% had their demand met within no more than 3 days, 86.5% within a week, 95.8% within 2 weeks. 4.2% waited more than 2 weeks but obtained it within the month.

To this number should be added the 131 patients (7.0%) that reported not having been able to obtain any HcQ and still being without it. While 47% of them have been waiting "only" for 1 week, 34% are already 2 or 3 weeks in the waiting, and 19% are reaching or exceeding one month.

Net, across the whole surveyed population, 59.4% of respondents have been able to obtain Hydroxychloroquine on the day of request, 18.9% with a delay not exceeding 3 days and a further 12.1% have experienced (or are at the day of the survey reaching) a delay of more than 3 but less than 7 days.

**6.7% of all patients have experienced a delay of 2 weeks or more or are still without HcQ more than 2 weeks after ordering.**

*Recommendation: (1) Systems should be implemented by National Authorities and Marketing Authorisation Holders to guarantee on-label prescriptions will be met within 3 days. This typically implies only delivering for “on label” orders from pharmacies, with any stock for off-label usage managed separately via hospitals, after making sure that sufficient quantities are assigned for on-label use. (2) Doctors should indicate on the prescription the pathology for which the delivery is requested to help patients have access to priority stocks.*

**By Country (only for countries with more than 40 answers):**

Immediate availability in pharmacy is highest in Finland, with 96% availability on 1<sup>st</sup> request, followed by Netherlands, Portugal and UK (70-75%). France, Germany, Switzerland (45-52%), Spain, Slovakia, Belgium, Italy (34-41%). Poland is lowest at 19%.

Availability within 3 days, the key performance indicator, should be of 100% in all geographies, but only Finland reaches this target. Portugal reaches 91%; followed by the Netherlands, Germany and Slovakia (86%); UK and Switzerland (80-81%), Belgium (75%), France (73%), Italy (71%), Spain (69%). Poland is lowest at 53%.

Extended Unavailability: While overall, 6.7% of all patients have experienced a delay of 2 weeks or more or are still without HcQ for more than 2 weeks, this number significantly varies by country, with Poland facing 27% unavailability and Spain 11%. Austria, with a low number of responses also appears to have a significant problem. On the other hand, Finland, Germany, Denmark and Slovakia have a lower unavailability rate (0-4%).

*Recommendation: (3) Patients should pre-order at the pharmacy a few days before they actually need Hydroxychloroquine, so that the supply chain can maximise availability on the day needed.*

**Quantities asked by patients:**

From those that obtained HcQ, around 50.0% asked for 1 box and received it, 33.6% asked for more than 1 box and received it, 11.7% asked for more than 1 box and received only 1, 4.7% received a smaller box than they asked. During the month, the proportion of patients that asked for more than one box and received one only increased from ca 7-8% early March to 11% end March.

*Recommendation: (4) patients should only order 1 box at the time, with the possible exception of Portugal, where the quantities contained in one box are very small (10 tablets only).*

**Anxiety:**

1754 patients reported their anxiety level about not being able to have access to Hydroxychloroquine, which was measured on a scale from 0 to 10. 15.9% reported low anxiety (up to 3/10), 26.9% mid (4 to 6), 36.4% reported high or very high anxiety (7 to 9), and 20.8% extremely high anxiety (10).

Amongst countries with more than 40 answers, the percentage of people with high, very high or extreme anxiety was highest in Poland (90%) and Germany (70%); followed by UK, Belgium and France (57-60%), Spain, Switzerland, Italy, (51%-54%) the Netherlands, Slovakia (45-47%), Finland (39%), and Portugal (15%).

There is a strong correlation (0.71) between the proportion of people with high to extreme anxiety and the proportion of people not able to obtain supply within 3 days.

*Recommendation: (5) When the product is not available immediately, pharmacies should use Marketing Authorisation supply support and inform patients about the mechanisms put in place to reassure them that the product should be available soon (unless there is a history of facing significant delays).*

**Bulgaria:**

The situation of Bulgaria is substantially different from that of other participating countries. De facto, there is little or no access to HcQ for lupus patient as HcQ is not an on-label prescription for lupus in Bulgaria. As a result, the vast majority of patients have de facto no access. From 173 having tried to obtain HcQ, 97 have been unable to obtain it, the majority of them for “more than 1 month”. 11 obtained it by international on-line purchases, 44 selected the mention “other”, and referred then to purchases in Greece, Turkey, Germany, family sending it from abroad. To this, one should add the 9 that received it from friends. This is a true problem of access to care, that represents a major issue in the EU landscape. We are unable to say, if a similar issue is present in other countries. This was obvious from Bulgarian results because we distributed a Bulgarian language version of the study, but as we did not do this in all countries (particularly in Eastern Europe), we have much lower response rates, and a similar problem, even if existing, would not be easy to spot.

*Recommendation: (6) Support should be given to Bulgarian patients to obtain access to hydroxychloroquine, as it has demonstrated its benefits around the world.*

**PATIENT REPORTED AVAILABILITY BY COUNTRY**  
(countries with more than 10 answers – alphabetical order)

Country	number of Answers	Hydroxychloroquine obtained			Hcq NOT Obtained
		Same day	One day	within 3 days	Delay > 2 weeks
AUT	14	14.3%	21.4%	42.9%	50.0%
BEL	93	45.2%	60.2%	75.3%	7.5%
BG	168	10.1%	15.5%	20.2%	60.1%
CHE	44	54.5%	65.9%	79.5%	6.8%
CZE	12	50.0%	66.7%	66.7%	16.7%
DEU	239	54.8%	71.5%	85.8%	3.8%
DNK	35	71.4%	80.0%	91.4%	2.9%
ESP	111	45.0%	50.5%	69.4%	10.8%
FIN	66	97.0%	98.5%	100.0%	0.0%
FRA	388	59.8%	64.9%	72.9%	6.2%
GBR	339	73.7%	75.8%	81.4%	6.2%
GRC	15	53.3%	66.7%	73.3%	0.0%
IRL	16	81.3%	81.3%	87.5%	0.0%
ITA	161	44.7%	53.4%	70.8%	9.3%
LTU	31	19.4%	35.5%	58.1%	9.7%
NLD	59	76.3%	76.3%	86.4%	0.0%
POL	45	24.4%	35.6%	53.3%	26.7%
PRT	64	76.6%	82.8%	90.6%	1.6%
SVK	49	49.0%	65.3%	85.7%	4.1%
SWE	18	72.2%	72.2%	88.9%	5.6%

Bulgaria numbers include obtaining it from abroad, postal deliveries or Friend/Family support